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2. (Original) The system of claim 1 wherein a hit prediction precipitates no change in the fetching process.

3. (Original) The system of claim 1 wherein a miss prediction results in switching fetching to a different stream.

4. (Previously amended) The system of claim 1 wherein the hit/miss predictor determines a hit probability, and the probability is used by the fetch algorithm in determining from where to fetch next instructions.

5. (Original) The system of claim 1 wherein the forecast of the hit/miss predictor is also used by a dispatch algorithm in selecting instructions from the pipeline to dispatch to functional units.

6. (Currently amended) A ~~multi-streaming~~ processor having multiple hardware streams supporting multiple data threads, comprising:

a data cache;

a fetch algorithm for selecting from which stream to fetch instructions; and

a hit/miss predictor for predicting whether instructions will hit or miss the cache;

wherein a prediction by the hit/miss predictor is used by the fetch algorithm in determining from ~~where~~ which stream to fetch.

7. (Original) The processor of claim 6 wherein a hit prediction precipitates no change in the fetching process.

8. (Original) The processor of claim 6 wherein a miss prediction results in switching fetching to a different stream.

9. (Previously amended) The processor of claim 6 wherein the hit/miss predictor

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determines a hit probability, and the probability is used by the fetch algorithm in determining from where to fetch next instructions.

10. (Original) The processor of claim 6 wherein the forecast of the hit/miss predictor is also used by a dispatch algorithm in selecting instructions from the pipeline to dispatch to functional units.

11. (Currently amended) In a ~~multi-streaming~~ processor having multiple hardware streams supporting multiple data threads, and a data cache, a method for fetching instructions from individual ones of multiple streams as instruction sources to a pipeline, comprising the steps of:

- (a) making a hit/miss prediction by a predictor as to whether instructions previously fetched will hit or miss the data cache; and
- (b) if the prediction is a miss, altering the source of the fetch.

12. (Previously amended) The method of claim 11 wherein the hit/miss predictor determines a hit probability, and the probability is used in determining fetch source.

13. (Original) The method of claim 11 wherein the forecast of the hit/miss predictor is also used by a dispatch algorithm in selecting instructions to dispatch to functional units.